EXHIBIT 4

FILED UNDER SEAL

IN THE UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

GOOGLE LLC,	CASE NO. 3:20-cv-06754-WHA
Plaintiff	Related to CASE NO. 3:21-cv-07559-WHA
v.	
SONOS, INC.,	
Defendant.	

REBUTTAL EXPERT REPORT OF SAMRAT BHATTACHARJEE REGARDING NON-INFRINGEMENT OF U.S. PATENT NO. 10,779,033 AND OTHER ISSUES

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"another Sender initiat[es] a Cast session with the Hub Sender."[18] Dr. Schmidt does not discuss the playback path for a "voice input" (or any other "trigger"), and has not shown that a Hub Device is configured to play back a remote queue, as opposed to a local queue, when playback is initiated using a voice command. Thus, my analysis below relates to the use case in which "another Sender initiat[es] a Cast session with the Hub." To the extent Dr. Schmidt is later permitted to discuss other playback scenarios, I reserve the right to respond.

189.   In this use case, Dr. Schmidt opines that a Hub Device is a "computing device" in the "first mode" when a mobile device (e.g., a smartphone) running the YouTube application Casts playback to the Hub Device. This is reflected in his source code citations. In particular, Dr. Schmidt states that the "following exemplary source code demonstrates that a Hub Sender has the capability to operate in a mode in which the Hub Sender is configured for playback of the Watch Next queue," and then points to source code that is for Casting from a different mobile sender device to a Hub Device via MDx. Schmidt Rpt., ¶247 (pointing to "handleMessage" method in loungeadapter.ts and the setPlaylist message in remote.ts[19]). Although I agree that a Hub Device is playing back a cloud queue when in a Cast session with a mobile device, I disagree with Dr. Schmidt that a Hub Device is a "computing device" that is configured in the claimed "first mode" in this scenario.

190.   In my opinion, a POSITA would understand a Hub Device is *not* a "computing device" in the claimed "first mode" when the mobile device is Casting to the Hub Device. The Hub Device is a Cast receiver device and is acting as a claimed "playback device" in this case.

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[18] I note that Dr. Schmidt's reference to a "Cast session with the Hub Sender" is a misnomer. When another devices Casts playback to a Hub Device, the Hub Device is acting as a Hub Receiver. It is not a Hub Sender.

[19] In /2021-02-01_YTReceivers09292020/google3/video/youtube/tv/bedrock/ts/mdx/services

application, and the accused YouTube applications do not play back a queue provided by a third-party application. Thus, Limitation 1.7 is not satisfied for at least this reason.

199.   Additionally, even accepting Dr. Schmidt's interpretation of "remote playback queue," Dr. Schmidt's opinion fails because he has not shown that the accused computing devices transfer playback responsibility of "***the*** remote playback queue" that he has accused in Limitation 1.4. In particular, I understand that a claim element in a patent is given antecedent basis, and that each subsequent reference to that same claim element is referred to as "the [element]." In the instant case, Limitation 1.4 recites that the "computing device is configured for playback of ***a*** remote playback queue," and this limitation then further requires that a playback device take over responsibility for playback of "***the*** remote playback queue." To be clear, I do not dispute that the YouTube applications are able to play back a separate cloud queue when Casting. However, that does not eliminate the requirement that Dr. Schmidt point to the same "remote playback queue" for this limitation as he did for Limitations 1.4. He has not.

200.   <u>First</u>, Dr. Schmidt has not met his burden of establishing infringement for Limitation 1.7. Dr. Schmidt does not provide any independent analysis of the "remote playback queue" requirement for this limitation. Instead, just as with Limitation 1.4, Dr. Schmidt vaguely refers to a "WatchNext queue provided by the YouTube cloud infrastructure." Schmidt Rpt., ¶298. As I explained in connection with Limitation 1.4, the term "Watch Next queue" does not identify any actual "playback queue," let alone show that the same alleged queue is being played back in Limitations 1.4 and Limitation 1.7. *See supra*, ¶¶159-163. Thus, I disagree that Dr. Schmidt has met his burden of establishing infringement for Limitation 1.7.

201.   <u>Second</u>, I showed that for Limitation 1.4 Dr. Schmidt has at best identified a "local queue" on a User Device (the alleged "computing device"). *See supra*, ¶¶164-177. A User Device

playing a local queue cannot transmit an instruction to "take over responsibility for playback of the remote playback queue from the computing device."

202. Third, when a User Device is Casting to a playback device, the playback device plays back a "Shared Queue" (also called a "Remote Queue," or "MDx queue"). Thus, for this limitation Dr. Schmidt must show that a User Device is configured to play back a Shared Queue prior to Casting, and that after Casting the User Device transfers playback responsibility of the Shared Queue to the playback device. Dr. Schmidt has not presented any evidence that a User Device plays back a Shared Queue when not Casting. It does not. That is because the Shared Queue is established only after a User Device initiates a Cast session. Because the Shared Queue does not exist until a user Casts playback, it cannot be "the remote playback queue" a User Device is configured to play back in Limitation 1.4 which occurs prior to Casting.

203. Dr. Schmidt points to my prior opinions during the Patent Showdown regarding the YouTube application using a cloud queue when Casting. Schmidt Rpt., ¶249. But these opinions support my current opinion that Limitation 1.7 is not satisfied because playback prior to Casting and playback after Casting do *not* use the same "playback queue." In particular, in the Patent Showdown I explained that *after* a user Casts playback to a playback device a cloud queue (the Shared Queue that I just discussed) on the MDx server is used. '615 Rebuttal Report, ¶¶82, 176-177. I explained that the cloud queue is implemented by the file SharedQueue.java, and an alleged playback device is then configured to play back this Shared Queue when in a Cast session. *Id.* Here, I agree that when Casting a playback device plays a "remote playback queue" (the Shared Queue). However, the '033 patent further requires that the "remote playback queue" played during Casting is the same "remote playback queue" played by a User Device when not Casting. That

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requirement is not met here because the Shared Queue that is used when Casting does not exist prior to Casting.
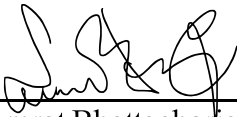
204.   Seemingly realizing that the Shared Queue does not exist prior to Casting, Dr. Schmidt states that the "MDx session server" manages "a *copy* of the Watch Next queue (referred to internally by Google as a 'remote queue,' 'MDx queue,' or 'shared queue') for use in the Cast session."   Schmidt Rpt., ¶133. I disagree. First, as I have already mentioned, Dr. Schmidt has not identified any "Watch Next queue," let alone shown that its contents are copied to a Shared Queue. In fact, I showed above that when a user is not Casting and edits a local queue, those edits are not reflected to the YouTube servers. *See supra*, ¶¶68, 70, 171. Thus the Shared Queue cannot simply be a copy of the queue that is playing prior to Casting. Second, even if there were such a thing as a "Watch Next queue" as Dr. Schmidt alleges, a "copy of the Watch Next queue" is necessarily different than the original "Watch Next queue." Thus, Dr. Schmidt has acknowledged that when Casting a playback device does not playback "the [alleged] remote playback queue."

205.   Google's documents confirm that the playback queue that is played back by a User device prior to Casting is not the same playback queue that is played back by a User Device after Casting. For instance, the presentation entitled "MDx Overview - 2015," which identifies "Ramona Bobohalma" (a creator of the YouTube Remote prior art) on its cover page explains that the Shared Queue (also known as the "RQ") that is used when Casting is "only valid for the [Cast] session."   GOOG-SONOSWDTX-00040119 (YouTube MDx Overview) at -136.   The presentation discloses that the Shared Queue has different properties and features than queues that are used by other accused YouTube applications when not Casting. *Id*. For example, the queues that are used by the accused YouTube applications prior to Casting allow for a user to add the same song or video to the queue multiple times (i.e., they allow "duplicates"), whereas the Shared

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I, Samrat Bhattacharjee, declare under penalty of perjury under the laws of the United

States that the foregoing is true and correct.

 DATED: January 13, 2023

Samrat Bhattacharjee